

tariffed.¹³⁸³ we thus do not adopt, under section 251, the *Expanded Interconnection* tariffing requirements originally adopted under section 201 for physical and virtual collocation. The existing tariffing requirements of *Expanded Interconnection* for interstate special access and switched transport will continue to apply for use by customers that wish to subscribe to those i n - services.¹³⁸⁴

568. We reject SBC's contention that we may not adopt any terms and conditions in this proceeding that differ from those in the *Expanded Interconnection* proceeding. SBC argues that Congress intended, in section 251(c)(6), to use the term "physical collocation" as a term of art, and thereby to adopt wholesale the terms and conditions for physical collocation that the Commission adopted in the *Expanded Interconnection* proceeding. A variety of terms and conditions for physical collocation are possible and section 251(c)(6) makes no reference to the Co&on's decisions on these issues in the *Expanded Interconnection* proceeding. If Congress had intended to readopt those rules wholesale without permitting the Commission any flexibility in the matter, we believe that Congress would have been more explicit rather than merely using the phrase "physical collocation." Thus, we believe that we can and should modify our preexisting standards, as set forth below, for purposes of implementing the provisions of section 251(c)(6). In the following sections (c. - i.) we address comments filed by interested parties concerning application of our existing *Expanded Interconnection* requirements for purposes of collocation under section 251.¹³⁸⁵

569. Finally, our experience reviewing the tariffs that incumbent LECs filed to implement our requirements for physical and virtual collocation suggests that rates, terms, and conditions under which incumbent LECs propose to provide these arrangements pursuant to section 251(c)(6) bear close scrutiny.¹³⁸⁶ We strongly urge state commissions to be vigilant in their review of such arrangements.¹³⁸⁷ We will review this issue and revise our requirements as necessary.

¹³⁸³ See *infra*, Section VI.B.2.a.

¹³⁸⁴ See *infra*, Section VI.B.2.a.

¹³⁸⁵ In a number of instances, we decline to adopt proposals for modifications to our *Expanded Interconnection* requirements.

¹³⁸⁶ See *Special Access Physical Collocation Designation Order*, 8 FCC Rcd 6909; *Virtual Collocation Designation Order*, 11 FCC Rcd 11116.

¹³⁸⁷ Some areas our investigations have found problematic in the past include channel assignment, letters of agency, charges for repeaters, and placement of point-of-termination bays.

c. **The Meaning of the Term "Premises"**

(1). **Background**

570. In the *Expanded Interconnection* proceeding, we required collocation at end offices, serving wire centers, and tandem switches, as well as at remote distribution nodes and any other points that the LEC treats as a "rating point."¹³⁸⁸ section 251(c)(6) requires physical collocation "at the premises of the local exchange carrier."¹³⁸⁹ In the NPRM, we tentatively concluded that the term "premises" includes, in addition to LEC central offices and tandem offices, all buildings or similar structures owned or leased by the incumbent LEC that house LEC network facilities. we sought comment on whether structures that house LEC network facilities on public rights-of-way, such as vaults containing loop concentrators or similar structures, should be deemed to be LEC "premises."¹³⁹⁰

(2). **Comments**

571. Incumbent LECs generally argue that collocation is infeasible at locations other than central offices, tandem switching locations, and remote nodes, and that only such locations should be included in the interpretation of the word "premises."¹³⁹¹ Pacific Telesis argues that points for collocation cannot be determined until the Commission determines the points of interconnection and access to unbundled network elements.¹³⁹² Ameritech contends that we should define the term "premises" as only those portions of central office buildings in which the LEC has the exclusive right of occupancy and in which the technically feasible point of interconnection or access to unbundled elements is located.¹³⁹³ The Rural Tel. Coalition asks that interconnection and collocation points be established in a flexible manner to recognize size and volume differences among carriers.¹³⁹⁴

¹³⁸⁸ See *Remand Order*, 9 FCC Rcd at 5168; *Special Access Order*, 7 FCC Rcd at 7418; *Switched Transport Order*, 8 FCC Rcd at 7409. A rating point is a point used in calculating the length of interoffice special access links.

¹³⁸⁹ 47 U.S.C. § 251(c)(6).

¹³⁹⁰ NPRM at para. 72.

¹³⁹¹ See, e.g., USTA comments at 20; NYNEX comments at 66; Cincinnati Bell comments at 15; Ameritech comments at 22 (the term "premises" should only include central offices housing network facilities in which the incumbent LEC has the exclusive right of occupancy).

¹³⁹² Bell Atlantic comments at 37.

¹³⁹³ Ameritech comments at 22.

¹³⁹⁴ Rural Tel. Coalition comments at 31.

572. CAPs and IXCs generally favor an expansive definition of the term "premises" that includes "structures housing LEC network facilities on public rights-of-way including vaults containing loop concentrators or similar structures."¹³⁹⁵ These commenters argue that physical collocation should be offered at any incumbent LEC location where physical collocation is technically feasible, including central offices, cable vaults, manholes, cross-connect points, loop carrier, and building closets.¹³⁹⁶ ALTS and MFS contend that assertions of technical infeasibility should be addressed in fact-specific situations and should not narrow the general application of section 251(c)(6).¹³⁹⁷ The Illinois Commission supports our tentative conclusion and argues that co&cation should not be restricted to central and tandem offices.¹³⁹⁸

(3). Discussion

573. The 1996 Act does not address the definition of premises, nor is the term discussed in the legislative history. Therefore, we look to the purposes of the 1996 Act and general uses of the term "premises" in other contexts in order to define this term for purposes of section 251(c)(6). The term "premises" is defined in varying ways, according to the context in which it is used.¹³⁹⁹ In light of the 1996 Act's procompetitive purposes, we find that a broad definition of the term "premises" is appropriate in order to permit new entrants to collocate at a broad range of points under the incumbent LEC's control. A broad definition will allow collocation at points other than those specified for collocation under the existing *Expanded Interconnection* requirements. We find that this result is appropriate because the purposes of physical and virtual collocation under section 251 are broader than those established in the *Expanded Interconnection* proceeding. We therefore interpret the term "premises" broadly to include LEC central offices, serving wire centers and tandem offices, as well as all buildings or similar structures owned or leased by the incumbent LEC that house LEC network facilities. We also treat as incumbent LEC premises any structures that house LEC network facilities on public rights-of-way, such as vaults containing loop concentrators or similar structures.

574. As discussed below, we conclude that section 251(c)(6) requires collocation only where technically feasible. In light of this conclusion, we find that adoption of a definition of "premises" that depends on whether interconnection or access to unbundled network elements at

¹³⁹⁵ See, e.g., AT&T comments at 40; see also Telecommunications Resellers Ass'n comments at 46; Hyperion comments at 14.

¹³⁹⁶ See, e.g., MFS comments at 23.

¹³⁹⁷ ALTS reply at 35; MFS reply at 29.

¹³⁹⁸ Illinois Commerce Commission at 33.

¹³⁹⁹ See *Gibbons v. Brandt*, 170 F.2d 385, 387 (7th Cir. 1948) ("the word 'premises' does not have a fixed and absolute meaning. It is to be determined always by its context . . .").

a particular point is "technically feasible," as suggested by Ameritech and Pacific Telesis, would be superfluous. We also conclude that it is not appropriate to adopt a definition of "premises," as suggested by several parties, that is dependent on whether it is "practical" to collocate equipment at a particular point. We note however, that neither physical nor virtual collocation is required at points where not technically feasible.¹⁴⁰⁰ We therefore decline to adopt specific requirements regarding collocation at particular points in the LEC network, as suggested by GVNW and others. Because collocation is only required where technically feasible, the approach we here adopt will enable competitors to take advantage of opportunities to collocate equipment without imposing undue burdens on incumbent LECs, whether large or small.

575. We also address the impact on small incumbent LECs. For example, the Rural Tel. Coalition asks that interconnection and collocation points be established in a flexible manner. We have considered the economic impact of our rules in this section on small incumbent LECs. For example, we do not adopt rigid requirements for locations where collocation must be provided. Incumbent LECs are not required to physically collocate equipment in locations where not practical for technical reasons or because of space limitations, and virtual collocation is required only where technically feasible. We also note, however, that section 251(f) of the 1996 Act provides relief to certain small LECs from our regulations implementing section 251.¹⁴⁰¹

d. Collocation Equipment

(1). Background

576. In the *Expanded Interconnection* proceeding, we allowed collocation for central office equipment needed to terminate basic transmission facilities between LEC central offices and third-party premises. Acceptable equipment included optical terminating equipment and multiplexers. We did not require the LECs to permit collocation of enhanced services equipment or customer premises equipment because such equipment was not necessary to foster competition in the provision of basic transmission services. We also did not require LECs to allow the collocation of switches.¹⁴⁰² Section 251(c)(6) requires incumbent LECs to allow collocation of "equipment necessary for interconnection or access to unbundled elements. . . ."¹⁴⁰³ We sought

¹⁴⁰⁰ Incumbent LECs are required to permit the collocation of equipment for the purpose of interconnection under section 251(c)(2) or access to unbundled network elements under section 251(c)(3). Interconnection and access to unbundled network elements are only required under these sections at technically feasible points. 47 U.S.C. § 251(c)(2) and (3).

¹⁴⁰¹ See *infra*, Section XII.

¹⁴⁰² See generally *Remand Order*, 9 FCC Rcd at 5178-81 (paras. 82-94); see also *Special Access Order*, 7 FCC Rcd at 7412-16, *Switched Transport Order*, 8 FCC Rcd at 7411-16.

¹⁴⁰³ 47 U.S.C. § 251(c)(6).

comment in the NPRM on what types of equipment competitors should be permitted to collocate on LEC premises.¹⁴⁰⁴

(2). **Comments**

577. BOCs and other incumbent LECs generally favor limiting the type of equipment allowed to be collocated to transmission equipment necessary to interconnect to LEC networks.¹⁴⁰⁵ Sprint argues that incumbent LECs should be permitted to limit the amount of space they have to provide to that needed for equipment necessary for the particular type of interconnection that is taking place.¹⁴⁰⁶ IXC and CAPs argue that any type of equipment may be collocated absent demonstrable harm to the LEC, and that any arbitrary limit on the types of equipment to be collocated could foreclose efficient methods of interconnection and/or access to unbundled elements.¹⁴⁰⁷ MFS contends that competing providers should not be required to demonstrate affirmatively that equipment is "necessary" before allowing it to be collocated. The Illinois Commission supports a policy that would not restrict the type of equipment to be collocated except where necessary to prevent harm to the network. The Colorado Commission supports limiting allowable equipment to that used to provide 8 telecommunications service.¹⁴⁰⁸ The Association of Telemessaging Services International urges the Commission to require collocation of equipment used to provide enhanced services.¹⁴⁰⁹

578. WinStar argues that the 1996 Act establishes its right to place its microwave facilities on the roofs of incumbent LEC buildings in which its termination equipment is to be collocated in order to ensure that wireline facilities are not favored over wireless, and therefore urges the Commission to adopt a collocation standard that is technology neutral.¹⁴¹⁰

¹⁴⁰⁴ NPRM at para.72.

¹⁴⁰⁵ See, e.g., SBC comments at 63-64; Bell Atlantic comments at 34; GTE reply at 14; PacTel comments at 38, reply at 13.

¹⁴⁰⁶ Sprint reply at 23.

¹⁴⁰⁷ See, e.g., MFS comments at 24; MCI comments at 54-55; Time Warner comments at 39; GCI comments at 10.

¹⁴⁰⁸ Illinois Commission comments at 34; Colorado Commission comments at 23.

¹⁴⁰⁹ Association of Telemessaging Services International reply at 16.

¹⁴¹⁰ WinStar comments at 4, reply at 4.

(3) . Discussion

579. We believe that section 251(c)(6) generally **requires** that **incumbent LECs** permit the collocation of equipment used for interconnection or access to unbundled network elements. Although the term "necessary," read most strictly, could be interpreted to mean "indispensable," we conclude that for the purposes of section 251(c)(6) "necessary" does not mean "indispensable" but rather "used" or "useful." This interpretation is most likely to promote fair competition consistent with the purposes of the Act. (We note that this view is consistent with the findings of the Colorado Commission).¹⁴¹¹ Thus, we read section 251(c)(6) to refer to equipment used for the purpose of interconnection or access to unbundled network elements.¹⁴¹² Even if the collocator could use other equipment to perform a similar function, the specified equipment may still be "necessary" for interconnection or access to unbundled network elements under section 251(c)(6). We can easily imagine circumstances, for instance, in which alternative equipment would perform the same function, but with less efficiency or at greater cost. A strict reading of the term "necessary" in these circumstances could allow LECs to avoid collocating the equipment of the interconnectors' choosing, thus undermining the procompetitive purposes of the 1996 Act.

580. Consistent with this interpretation, we conclude that transmission equipment, such as optical terminating equipment and multiplexers, may be collocated on LEC premises. We also conclude that LECs should continue to permit collocation of any type of equipment currently being collocated to terminate basic transmission facilities under the *Expanded Interconnection* requirements. In addition, whenever a telecommunications carrier seeks to collocate equipment for purposes within the scope of section 251(c)(6), the incumbent LEC shall prove to the state commission that such equipment is not "necessary," as we have defined that term, for interconnection or access to unbundled network elements. State commissions may designate specific additional types of equipment that may be collocated pursuant to section 251(c)(6).

581. We do not find, however, that section 251(c)(6) requires collocation of equipment used to provide enhanced services, contrary to the arguments of the Association of Telemessaging Services International.¹⁴¹³ We also decline to require incumbent LECs to allow

¹⁴¹¹ Colorado Public Utilities Commission, *Proposed Rules Regarding Implementation of §§ 40-15-101 et. seq., Requirements Relating to Interconnection and Unbundling*, Docket No. 95R-556T, (Colorado Commission, March 29, 1996) at 19-20.

¹⁴¹² Cf. *National Railroad Passenger Corporation v. Boston and Maine Corp.*, 503 U.S. 407, 417 (1992) (upholding the ICC's interpretation of the word "required" as "useful or appropriate," rather than "indispensable"); *McCulloch v. Maryland*, 4 Wheat. 316, 413 (1819) (Chief Justice Marshall read the word "necessary" to mean "convenient, or useful," rejecting a stricter reading of the term).

¹⁴¹³ ATSI reply at 16.

collocation of any equipment without restriction.¹⁴¹⁴ Section 251(c)(6) requires collocation only of equipment "necessary for interconnection or access to unbundled elements." Section 251(c)(2) requires incumbent LECs to provide "interconnection" for the "transmission and routing of telephone exchange service and exchange access," and section 251(c)(3) requires incumbent LECs to provide access to unbundled network elements "for the provision of a telecommunications service."¹⁴¹⁵ Section 251(c)(6) therefore requires incumbent LECs to provide physical or virtual collocation only for equipment "necessary" or used for those purposes. We find that section 251(c)(6) does not require collocation of equipment necessary to provide enhanced services.¹⁴¹⁶ At this time, we do not impose a general requirement that switching equipment be collocated since it does not appear that it is used for the actual interconnection or access to unbundled network elements.¹⁴¹⁷ We recognize, however, that modern technology has tended to blur the line between switching equipment and multiplexing equipment, which we permit to be collocated. We expect, in situations where the functionality of a particular piece of equipment is in dispute, that state commissions will determine whether the equipment at issue is actually used for interconnection or access to unbundled elements. We also reserve the right to reexamine this issue at a later date if it appears that such action would further achievement of the 1996 Act's procompetitive goals. Finally, because we lack an adequate record on the issue, we decline to adopt AT&T's proposal that we require that incumbent LECs allow collocated equipment to be used for "hubbing."¹⁴¹⁸

582. In response to WinStar's suggestion that we require collocation of microwave transmission facilities, we note that collocation of microwave transmission equipment was required where reasonably feasible by the *Special Access Order*.¹⁴¹⁹ We also require the

¹⁴¹⁴ See, e.g., MFS comments at 24.

¹⁴¹⁵ 47 U.S.C. § 251(c)(3).

¹⁴¹⁶ We note that we declined to require collocation of enhanced services equipment in our *Computer III* and *ONA* proceedings. See *Third Computer Inquiry*, Report and Order, 104 FCC 2d 958, 1037-38 (1986); *Computer III Remand*, 6 FCC Rcd 7571 (1991). Enhanced services are defined as services that "employ computer processing applications which act on the format, content, code, protocol or similar aspects of the subscriber's transmitted information; provide the subscriber additional, different, or restructured information; or involve subscriber interaction with stored information." 47 C.F.R. § 64.702. This definition appears not to include the provision of "telecommunications services." See 47 U.S.C. § 153(43), (46).

¹⁴¹⁷ If switching equipment is located at the collocated space, generally the only equipment used for interconnection or access to unbundled elements is the cross-connect equipment. The switching equipment generally performs other functions.

¹⁴¹⁸ AT&T advocates requiring LECs to allow new entrants to "connect additional equipment of their own to their collocated equipment in the collocated space." Letter from Betty Brady, Federal Government Affairs Director and Attorney, to Robert McDonald, Common Carrier Bureau, July 12, 1996, at 3, n.2 (AT&T July 12, 1996 *Ex Parte*). See also AT&T comments at 40 n. 51.

¹⁴¹⁹ *Special Access Order*, 7 FCC Rcd at 7416; see also *Remand Order*, 9 FCC Rcd at 5178-79.

collocation of microwave equipment under section 251, although we modify the *Expanded Interconnection* standard we adopt under section 251 for when such collocation is required slightly to conform to the standard for the provision of physical collocation in section 251(c)(6). We therefore require that incumbent LECs allow competitors to use physical collocation for microwave transmission facilities except where this is not practical for technical reasons or because of space limitations, in which case virtual collocation is required where technically feasible.¹⁴²⁰

e. Allocation of Space

(1). Background

583. In the *Expanded Interconnection* proceeding, we required LECs to allocate space for physical collocation on a first-come, first-served basis. We also required LECs to take into account interconnector demand for collocation space when reconfiguring space or building new central offices, and we found that imposing reasonable restrictions on warehousing of space by collocating carriers was appropriate.¹⁴²¹ The NPRM sought comment on whether national guidelines would deter anticompetitive behavior through the manipulation or unreasonable allocation of space by either incumbent LECs or new entrants.¹⁴²²

(2). Comments

584. CAPS and Ixcs support adoption of rules governing incumbent LEC space allocation. AT&T asserts that incumbent LECs should be required to consider the needs of collocators when remodeling or building new facilities.¹⁴²³ MFS and Teleport contend that incumbent LECs should not be able to limit the amount of space that may be occupied by an interconnector's equipment unless the incumbent LEC demonstrates that space is nearing exhaustion.¹⁴²⁴ MCI asserts that we should prohibit an incumbent LEC from denying a collocator use of available space unless the incumbent demonstrates that it had plans for such space prior to

¹⁴²⁰ Under our technical feasibility standard, the costs of any construction necessary to accommodate the proposed interconnection arrangement are to be borne by the party seeking to interconnect. See *supra*, Section IV.E.

¹⁴²¹ *Special Access Order*, 7 FCC Rcd at 7408.

¹⁴²² NPRM at para.72.

¹⁴²³ AT&T comments at 41-42 (where space is unavailable incumbent LECs should be required to provide trunking at no extra cost and enable the interconnector to connect to designated equipment elsewhere, with a timetable for moving the interconnector to the incumbent LEC's premises when space becomes available).

¹⁴²⁴ MFS comments at 34; Teleport comments at 33.

the request for collocation.¹⁴²⁵ In locations where space is scarce, MCI argues that incumbent LECs should be required to file reports with the FCC on the status and planned increase and use of space.¹⁴²⁶ Bell Atlantic counters that such a policy could prevent it from serving its customers efficiently.¹⁴²⁷ Pacific Telesis suggests that the Commission reiterate its policy of allowing "reasonable restrictions on warehousing of unused space by interconnectors."¹⁴²⁸ The Pennsylvania Commission asserts that it is not necessary for the FCC to adopt national guidelines regarding space allocation.¹⁴²⁹ GVNW argues that collocation should be required in rural areas only where there is space available.¹⁴³⁰

(3) . Discussion

585. We believe that incumbent LECs have the incentive and capability to impede competitive entry by minimizing the amount of space that is available for collocation by competitors. Accordingly, we adopt our *Expanded Interconnection* space allocation rules for purposes of section 251, except as indicated herein. LECs will thus be required to make space available to requesting carriers on a first-come, first-served basis. We also conclude that collocators seeking to expand their collocated space should be allowed to use contiguous space where available. We further conclude that LECs should not be required to lease or construct additional space to provide physical collocation to interconnectors when existing space has been exhausted. We find such a requirement unnecessary because section 251(c)(6) allows incumbent LECs to provide virtual collocation where physical collocation is not practical for technical reasons or because of space limitations. Consistent with the requirements and findings of the *Expanded Interconnection* proceeding, we conclude that incumbent LECs should be required to take collocator demand into account when renovating existing facilities and constructing or leasing new facilities, just as they consider demand for other services when undertaking such projects. We find that this requirement is necessary in order to ensure that sufficient collocation space will be available in the future. We decline, however, to adopt a general rule requiring LECs to file reports on the status and planned increase and use of space. State commissions will determine whether sufficient space is available for physical collocation, and we conclude that they have authority under the 1996 Act to require incumbent LECs to file such reports. We

¹⁴²⁵ MCI comments at 56.

¹⁴²⁶ MCI comments at 56.

¹⁴²⁷ Bell Atlantic reply at 16.

¹⁴²⁸ PacTel comments at 36.

¹⁴²⁹ Pennsylvania Commission comments at 22.

¹⁴³⁰ GVNW comments at 8.

expect individual state commissions to determine whether the filing of such reports is warranted.

586. We also agree with Pacific Telesis that restrictions on warehousing of space by interconnectors are appropriate.¹⁴³¹ Because collocation space on incumbent LEC premises may be limited, inefficient use of space by one competitive entrant could deprive another entrant of the opportunity to collocate facilities or expand existing space. In the *Expanded Interconnection proceeding*, we allowed "reasonable restrictions on warehousing of space,"¹⁴³² and will adopt this provision for purposes of section 251. As discussed below, we also adopt measures to ensure that incumbent LECs themselves do not unreasonably "warehouse" space, although we do permit them to reserve a limited amount of space for specific future uses.¹⁴³³ Incumbent LECs, however, are not permitted to set maximum space limitations without demonstrating that space constraints make such restrictions necessary, as such maximum limits could constrain a collocators' ability to provide service efficiently.

587. We also address the impact on small incumbent LECs. For example, GVNW argues that we should require collocation in rural areas only where there is space available. We have considered the impact of our rules in this section on small incumbent LECs and do not require physical collocation at any point where there is insufficient space available. We decline, however, to adopt rules regarding space availability that apply differently to small, rural carriers because the rules we here adopt are sufficiently flexible. We also note, however, that section 251(f) of the 1996 Act provides relief to certain small LECs from our regulations implementing section 251.¹⁴³⁴

f. Leasing Transport Facilities

(1). B & ground

588. Our *Expanded Interconnection* rules require LECs to provide collocation for the purpose of allowing collocators to terminate their own transmission facilities for special access or switched transport service.¹⁴³⁵ We did not require that collocation be made available for other

¹⁴³¹ PacTel comments at 36.

¹⁴³² *Special Access Or&r*, 7 FCC Rcd at 7408; *see also Remand Order*, 9 FCC Rcd at 187-88.

¹⁴³³ *See infra*, Section VI.B.i.i.

¹⁴³⁴ *See infra*, Section XII.

¹⁴³⁵ *See Remand Order*, 9 FCC Rcd at 5180-81, 5183; *Special Access Order*, 7 FCC Rcd at 7403; *Switched Transport Order*, 8 FCC Rcd at 7402.

purposes, for example, when the interconnecting party wished only to connect incumbent LEC transmission facilities to collocated equipment. We sought comment in the NPRM on whether we should modify the standards of the *Expanded Interconnection* proceeding in light of the new statutory requirements and disputes that have arisen in the investigations regarding the incumbent LECs' physical and virtual collocation tariffs.¹⁴³⁶

(2). Comments

589. MCI and others argue that collocators should not be prohibited from leasing transport facilities from the incumbent LEC to connect equipment in the collocated space to any other point in the incumbent LEC's network.¹⁴³⁷ Pacific Telesis contends that LECs should not be required to permit collocation of equipment that will be connected to a LEC's transmission facilities because such a policy would result in exhaustion of central office space and is outside the purposes of the 1996 Act.¹⁴³⁸ Bell Atlantic argues that permitting such in-on is not advisable, because it would allow resellers to obtain lower-priced interconnection and access to unbundled elements without providing any facilities of their own.¹⁴³⁹

(3). Discussion

590. Although in *Expanded Interconnection* the Commission required that interested parties interconnect collocated equipment with their own transmission facilities,¹⁴⁴⁰ we conclude that it would be inconsistent with the provisions of the 1996 Act to adopt that requirement under section 251. Rather, we conclude that a competitive entrant should not be required to bring transmission facilities to LEC premises in which it seeks to collocate facilities. Entrants should instead be permitted to collocate and connect equipment to unbundled network transmission elements obtained from the incumbent LEC. The purpose of the *Expanded Interconnection* requirement was to foster competition in the market for interstate switched and special access transmission facilities.¹⁴⁴¹ The purposes of section 251 are broader. Section 251 (c)(3) requires that competitive entrants be given access to unbundled elements and that they be permitted to

¹⁴³⁶ NPRM at para. 73.

¹⁴³⁷ MCI comments at 55; ACTA comments at 16; Tel-- Resellers Ass'n comments at 47.

¹⁴³⁸ PacTel comments at 39, reply at 14.

¹⁴³⁹ Bell Atlantic reply at 16.

¹⁴⁴⁰ *Special Access Order*, 7 FCC Rcd at 7403; *Switched Transport Order*, 8 FCC Rcd at 7402.

¹⁴⁴¹ See *Special Access Order*, 7 FCC Rcd at 7372; *Switched Transport Order*, 8 FCC Rcd at 7377.

combine such elements.¹⁴⁴² Prohibiting competitors from connecting unbundled network elements to their collocated equipment would appear contrary to the provisions of section 251(c)(3).

591. Finally, we find that Bell Atlantic's opposition to this requirement is without merit. Bell Atlantic argues that collocators should be required to provide their own transmission facilities because otherwise new entrants could compete without providing any of their own facilities. Section 251(c)(3) specifically states that unbundled elements are to be provided in a manner that allows requesting carriers to combine elements in order to provide telecommunications service. As stated above, requiring collocators to supply their own transmission facilities would amount to a prohibition on connecting unbundled transmission facilities to other unbundled elements connected to equipment in the collocation space. Although such interconnection arrangements were not required by our *Expanded Interconnection* requirements, we conclude that they are required by section 251 when collocated equipment is used to achieve interconnection or access to unbundled network elements.

g. Co-Carrier Cross-Connect

(1). Background

592. In the most common collocation configuration under existing requirements, the designated physical collocation space of several competitive entrants is located close together within the LEC premises. Since carriers connect to the collocation space via high-capacity lines, different competitive entrants seeking to interconnect with each other may find connecting between their respective collocation spaces on the LEC premises the most efficient means of interconnecting with each other. We sought comment in the NPRM on whether we should adopt any requirements in addition to those adopted in the *Expanded Interconnection* proceeding in order to fulfill the mandate of the 1996 Act.¹⁴⁴³

(2). Comments

593. Several CAPs and IXCs argue that we should adopt as an additional requirement that interconnectors be allowed to connect directly to other collocators located at the collocation space.¹⁴⁴⁴ Incumbent LECs generally object to such a configuration on the basis that such access

¹⁴⁴² 47 U.S.C. 251(c)(3).

¹⁴⁴³ NPRM at para. 73.

¹⁴⁴⁴ See, e.g., MCI comments 355; MFS comments at 24; GGI comments at 10; Telecommunications Resellers Ass'n comments at 47; Intermedia comments at 9.

is not expressly required by the statute and that we therefore lack authority to impose such a requirement.¹⁴⁴⁵

(3). Discussion

594. We believe that it serves the public interest and is consistent with the policy goals of section 251 to require that incumbents permit two or more collocators to interconnect their networks at the incumbent's premises. Parties opposed to this proposal have offered no legitimate objection to such interconnection. Allowing incumbent LECs to prohibit collocating carriers from interconnecting their collocated equipment would require them to interconnect collocated facilities by routing transmission facilities outside of the LECs' premises. We find that such a policy would needlessly burden collocating carriers. To the extent equipment is collocated for the purposes expressly permitted under section 251(c)(6), the statute does not bar us from requiring that incumbent LECs allow connection of such equipment to other collocating carriers located nearby. We find that requiring LECs to allow such interconnection of collocated equipment will foster competition by promoting efficient operation. It is also unlikely to have a significant effect on space availability. We find authority for such a requirement in section 251(c)(6), which requires that collocation be provided on "terms and conditions that are just, reasonable, and nondiscriminatory" and in section 4(i), which permits the Commission to "perform any and all acts, make such rules and regulations, and issue such orders, not inconsistent with this Act, as may be necessary in the execution of its functions."¹⁴⁴⁶ We therefore will require that incumbent LECs allow collocating telecommunications carriers to connect collocated equipment to such equipment of other carriers within the same LEC premises so long as the collocated equipment is used for interconnection with the incumbent LEC or access to the LEC's unbundled network elements.

595. We clarify that we here require incumbent LECs to provide the connection between the equipment in the collocated spaces of two or more collocating telecommunications carriers unless they permit the collocating parties to provide this connection for themselves. We do not require incumbent LECs to allow placement of connecting transmission facilities owned by competitors within the incumbent LEC premises anywhere outside of the actual physical collocation space.

h. Security Arrangements

(1). Background

¹⁴⁴⁵ See, e.g., GTE reply at 15; Bell Atlantic reply at 15; PacTel reply at 14; Sprint reply at 23.

¹⁴⁴⁶ 47 U.S.C. § 154(i).

5%. Under our *Expanded Interconnection* requirements, incumbent LECs typically require that physically collocated equipment be placed inside a collocation cage within the incumbent LEC facility. Such cages are intended to separate physically the competitors facilities from those of the incumbent and to prevent access by unauthorized personnel to any parties' equipment. Such cages frequently add considerably to the cost of establishing physical collocation at a particular LEC premises and could constitute a barrier to entry in certain circumstances.

(2). Comments

597. Teleport argues that cage construction is one of the most expensive items associated with physical collocation and that we should modify our *Expanded Interconnection* requirements to allow new entrants to subcontract construction of their physical collocation security arrangements with contractors approved by the incumbent LEC.¹⁴⁴⁷ ALTS and MCI argue that security measures should only be provided at the request of the entrant and at the cost the entrant would have incurred if it performed the construction itself.¹⁴⁴⁸ GVNW argues that incumbent LECs need to ensure that a competitor's personnel do not cause breaches of security and therefore should be subject to minimum proficiency requirements.¹⁴⁴⁹

(3). Discussion

598. Based on the comments in this proceeding and our previous experience with physical collocation in the *Expanded Interconnection* docket, we will continue to permit LECs to require reasonable security arrangements to separate an entrant's collocation space from the incumbent LEC's facilities. The physical security arrangements around the collocation space protect both the LEC's and competitor's equipment from interference by unauthorized parties. We reject the suggestion of ALTS and MCI that security measures be provided only at the request of the entrant since LECs have legitimate security concerns about having competitors' personnel on their premises as well. We conclude that the physical separation provided by the collocation cage adequately addresses these concerns. At the same time, we recognize that the construction costs of physical security arrangements could serve as a significant barrier to entry, particularly for smaller competitors. We also conclude that LECs have both an incentive and the capability to impose higher construction costs than the new entrant might need to incur. We therefore conclude that collocating parties should have the right to subcontract the construction of the physical collocation arrangements with contractors approved by the incumbent LEC.

¹⁴⁴⁷ Teleport comments at 32.

¹⁴⁴⁸ ALTS comments at 23; MCI comments at 58; *contra* PacTel reply at 15.

¹⁴⁴⁹ GVNW comments at 10; *accord* Rural Tel. Coalition comments at 31.

Incumbent LECs shall not unreasonably withhold such approval of contractors. Approval by incumbent LECs of such contractors should be based on the same criteria as such LECs use for approving contractors for their own purposes. We decline, however, to require that competitive entrants' personnel be subject to minimum training and proficiency requirements as suggested by GVNW. We find that such concerns are better resolved through negotiation and arbitration.

i. **Allowing Virtual Collocation in Lieu of Physical**

(1). **Background**

599. Section 251(c)(6) requires that incumbent LECs provide physical collocation unless the carrier "demonstrates to the state commission that physical collocation is not practical for technical reasons or because of space limitations" ¹⁴⁵⁰ In the NPRM, we sought comment on whether the Commission should establish guidelines for states to apply when determining whether physical collocation is not practical for "technical reasons or because of space limitations." ¹⁴⁵¹

(2). **Comments**

600. Pacific Telesis argues that national standards to determine whether physical collocation is not practical at a specific LEC location are unnecessary. It further argues that "reduced reliability or other harm to the network" should be considered a technical reason that justifies refusal to allow physical collocation. ¹⁴⁵² IXC and CAPs assert that the burden of showing that physical collocation is not practical should fall on the incumbent LEC. ¹⁴⁵³ AT&T contends that an incumbent LEC should be required to show that there is no practical way of providing additional space before it is relieved of its obligation to provide physical collocation. If physical collocation is genuinely not practical, then AT&T argues that the incumbent should provide trunking at no cost to allow the entrant to interconnect. ¹⁴⁵⁴ Time Warner asserts that, where physical collocation is not possible in a LEC central office, LECs should supply a substitute at cost. ¹⁴⁵⁵ state commissions that comment on this issue generally oppose strict

¹⁴⁵⁰ 47 U.S.C. § 251(c)(6).

¹⁴⁵¹ NPRM para. 72.

¹⁴⁵² PacTel comments at 39.

¹⁴⁵³ See, e.g., Hyperion comments at 14; ACSI comments at 16; AT&T comments at 41.

¹⁴⁵⁴ AT&T comments at 41-42.

¹⁴⁵⁵ Time Warner comments at, 36, 40.

national rules and argue that, to the extent such rules are adopted, they should allow the states maximum flexibility.¹⁴⁵⁶

601. Time Warner also asserts that the FCC should require LECs to offer a \$1 sale and repurchase option for virtually collocated equipment.¹⁴⁵⁷ The Independent Cable and Telecommunications Association argues that incumbent LECs should be required to provide virtual collocation that is equal in all functional aspects to physical collocation in order to avoid prejudicing small entities that may not have sufficient market share to justify a physical collocation arrangement.¹⁴⁵⁸

(3). Discussion

602. Section 251 (c)(6) clearly contemplates the provision of virtual collocation when physical collocation is not practical for technical reasons or because of space limitations.¹⁴⁵⁹ Section 251(c)(6) requires the incumbent LEC to demonstrate to the state commission's satisfaction that there are space limitations on the LEC premises or that technical considerations make collocation impractical. Because the space limitations and technical practicality issues will vary considerably depending on the location at which competitor equipment is to be collocated, we find that these issues are best handled on a case-by-case basis, as they were under our *Expanded Interconnection* requirements.¹⁴⁶⁰ In light of our experience in the *Expanded Interconnection* proceeding, we require that incumbent LECs provide the state commission with detailed floor plans or diagrams of any premises where the incumbent alleges that there are space constraints. Submission of floor plans will enable state commissions to evaluate whether a refusal to allow physical collocation on the grounds of space constraints is justified. We also find that the approach detailed by AT&T in its July 12 *Ex Parte* submission to be useful and believe that state commissions may find it a valuable guide.¹⁴⁶¹

¹⁴⁵⁶ See, e.g., Texas Commission comments at 14; Pennsylvania Commission comments at 22; Oregon Commission comments at 23.

¹⁴⁵⁷ Time Warner comments at 38.

¹⁴⁵⁸ ICTA reply at 13.

¹⁴⁵⁹ 47 U.S.C. § 251 (c)(6).

¹⁴⁶⁰ See *Special Access Or&r*, 7 FCC Rcd 7407.

¹⁴⁶¹ AT&T describes a detailed proposed showing that would be required of an incumbent LEC that claims physical collocation is not practical because of space exhaustion. The proposed showing would require the specific identification of the space on incumbent LEC premises that is used for various purposes, as well as specific plans for rearrangement/expansion and identification of steps taken to avoid exhaustion. AT&T July 12, 1996 *Ex Parte*.

603. Although **section 251(c)(6) provides** that **incumbent LECs are** not required to provide physical collocation where impractical for technical reasons or because of space **limitations, our experience in the Expanded Interconnection proceeding has not demonstrated that technical reasons, apart from those related to space availability, are a significant impediment to physical collocation.** We **therefore** decline to adopt any rules for **determining** when physical collocation **should be deemed impractical for technical reasons.**

604. **Incumbent LECs are allowed to retain a limited amount of floor space for defined future uses. Allowing competitive entrants to claim space that incumbent LECs had specifically planned to use could prevent incumbent LECs from serving their customers effectively.**¹⁴⁶² **Incumbent LECs** may not, however, reserve space **for future** use on terms more favorable **than** those that apply to other **telecommunications** carriers seeking to hold collocation space for their **own future use.**¹⁴⁶³

605. We decline to adopt AT&T's suggestion that incumbent **LECs should be required to lease additional space or provide trunking at no cost where they have insufficient space for physical collocation.**¹⁴⁶⁴ In light of the **availability** of **substitute** virtual collocation arrangements, **we find that requiring the type of "substitute" for physical collocation as advocated by AT&T is unnecessary.** We similarly reject Time Warner's suggestion that incumbent **LECs** supply a "substitute" for physical **collocation** at cost, except to the **extent** we require virtual collocation. **On the other hand, we will require incumbent LECs with limited space availability to take into account the demands of interconnectors when planning renovations and leasing or constructing new premises, as we have in the Expanded Interconnection proceeding.**¹⁴⁶⁵

606. **Incumbent LECs** are not required to provide collocation at locations where it is not technically feasible to provide virtual collocation. Although space **constraints** are a concern normally associated with physical **collocation**, given our broad reading of the term **"premises,"**¹⁴⁶⁶ we find that spa& constraints could **preclude** virtual collocation at certain LEC **premises as well. State commissions** will decide whether virtual collocation is technically feasible at a given point. We do, however, require that incumbent **LECs** relinquish any space **held for future use before denying virtual collocation due to a lack of space unless the incumbent** can prove to a state commission that virtual collocation at that point is not technically feasible.

¹⁴⁶² *Special Access Or&r*, 7 FCC Rcd at 7409.

¹⁴⁶³ *See supra*, Section VI.B. 1 .e.

¹⁴⁶⁴ *See* AT&T comments at 41-42.

¹⁴⁶⁵ *See Special Access Order*, 7 FCC Rcd at 7408.

¹⁴⁶⁶ *See supra*, Section VI.B.1.c.

Moreover, when virtual collocation is not **feasible, we require** that incumbent LECs provide other forms of interconnection and access to unbundled network elements to the extent technically feasible.¹⁴⁶⁷

607. Finally, we decline to require that incumbent LECs provide virtual collocation that is equal in all functional aspects to physical collocation. Our *Expanded Interconnection* rules required a variety of standards for the virtual collocation and have been largely successful. In addition, Congress was aware of the differences between virtual and physical collocation when it adopted section 251(c)(6), and this section does not specify any requirements for virtual collocation.¹⁴⁶⁸ As discussed above, we adopt the *Expanded Interconnection* requirements for virtual collocation under section 251.¹⁴⁶⁹ We find, however, that a standard simply requiring equality in all functional aspects could be difficult to administrate and could lead to substantial disputes. We also decline to adopt the suggestion that we require LECs to offer virtual collocation under the "\$1 sale and repurchase option."¹⁴⁷⁰ We do not find evidence that such a specific requirement is necessary at this time. We reserve the right to revisit these issues in the future, however, if we perceive that smaller entities would be disadvantaged by our existing standards.

2 . Legal Issues

a. Relationship between *Expanded Interconnection* Tariffs and Section 251

(1) . Background

608. The enactment of sections 251 and 252 raises the question of whether, and to what extent, the **interconnection**, access to unbundled network element, and collocation requirements set forth in those sections, and the delegation of **specific** rate-setting authority to the states under section 252(d)(1), as a matter of law **supplant** our **section 201 *Expanded Interconnection* requirements**. We tentatively concluded in the NPRM that our existing *Expanded*

¹⁴⁶⁷ See *supra*, Section VI.A.

¹⁴⁶⁸ See *Remand Order*, 9FCCRcdat5166-69.

¹⁴⁶⁹ See *supra*, Section VI.B. 1 .a

¹⁴⁷⁰ This configuration is described as involving "the acquisition by the interconnectors of the equipment to be dedicated for interconnectors' use on the LEC premises and the sale of that equipment to the LECs for a nominal \$1 sum while maintaining a repurchase option." Time Warner comments at 42.

Interconnection policies for interstate special access and switched transport should continue to apply.¹⁴⁷¹

(2). Comments

609. Although commenting parties have not addressed this question directly, some commenters appear to assume that LECs will be required to continue to tariff their collocation offerings with the FCC, as currently required under *Expanded Interconnection*.¹⁴⁷² Other parties appear to assume that requirements to file federal tariffs are inconsistent with, and superseded by, the negotiation and arbitration provisions in section 252.

(3). Discussion

610. Our *Expanded Interconnection* rules require the largest incumbent LECs to file tariffs with the Commission to offer collocation to parties that wish to terminate interstate special access and switched transport transmission facilities. Section 252 of the 1996 Act, on the other hand, provides for interconnection arrangements rather than tariffs, for review and approval of such agreements by state commissions rather than the FCC, and for public filing of such agreements. Section 252 procedures, however, apply only to "request[s]" for interconnection, services, or network elements pursuant to section 251.¹⁴⁷³ Such procedures do not, by their terms, apply to requests for service under section 201. Moreover, section 251 (i) expressly provides that "[n]othing in this section shall be construed to limit or otherwise affect the Commission's authority under section 201,"¹⁴⁷⁴ which provided the statutory basis for our *Expanded Interconnection* rules. Thus, we find that the 1996 Act, as a matter of law, does not displace our *Expanded Interconnection* requirements, and, in fact, grants discretion to the FCC to preserve our existing rules and tariffing requirements to the extent they are consistent with the Communications Act.

611. We further conclude that it would make little sense to find that sections 251 and 252 supersede our *Expanded Interconnection* rules, because the two sets of requirements are not coextensive. For example, our *Expanded Interconnection* rules encompass collocation for interstate purposes for all parties, including non-carrier end users, that seek to terminate

¹⁴⁷¹ NPRM at para. 73.

¹⁴⁷² See, e.g., MFS comments at 32; MCI comments at 58.

¹⁴⁷³ 47 U.S.C § 252(a)(1) (emphasis added).

¹⁴⁷⁴ Section 201 authorizes the Commission "to establish physical connections with other carriers . . ." 47 U.S.C. 9201.

transmission facilities at LEC central offices.¹⁴⁷⁵ In comparison, section 251 requires collocation only for "any requesting telecommunications carrier."¹⁴⁷⁶ Certain competing carriers -- and non-carrier customers not covered by section 251 -- may prefer to take interstate expanded interconnection service under general interstate tariff schedules. We find that it would be unnecessarily disruptive to eliminate that possibility at this time. We also conclude that permitting requesting carriers to seek interconnection pursuant to our *Expanded Interconnection* rules as well as section 251 is consistent with the goals of the 1996 Act to permit competitive entry through a variety of entry strategies. Thus, a requesting carrier would have the choice of negotiating an interconnection agreement pursuant to sections 251 and 252 or of taking tariffed interstate service under our *Expanded Interconnection* rules.

612. Finally, we expect that, over time, sections 251 and 252 and our implementing rules may replace our *Expanded Interconnection* rules as the primary regulations governing interconnection for carriers. We note that section 251 is broader than our *Expanded Interconnection* requirements in certain respects. For example, section 251 requires incumbent LECs to offer collocation for purposes of accessing unbundled network elements, whereas our *Expanded Interconnection* rules require collocation only for the provision of interstate special access and switched transport.¹⁴⁷⁷ In addition, section 251(c)(6) requires incumbents to offer physical collocation subject to certain exceptions, whereas our existing *Expanded Interconnection* rules only require carriers to offer virtual collocation, although they may choose to offer physical collocation under Title II regulation in lieu of virtual collocation. In the future, we may review the need for a separate set of *Expanded Interconnection* requirements and revise our requirements if necessary. We believe that this approach is consistent with Congress' determination that the need for federal regulations will likely decrease as the provisions of the 1996 Act take effect and competition develops in the local exchange and exchange access markets.¹⁴⁷⁸

b. Takings Issues

(1). Background

613. In *Bell Atlantic v. FCC*, the U.S. Court of Appeals for the D.C. Circuit found that the Commission lacked authority under the Communications Act to impose physical collocation

¹⁴⁷⁵ *Special Access Order*, 7 FCC Rcd at 7403.

¹⁴⁷⁶ See 47 U.S.C. § 251(c)(2) and (3).

¹⁴⁷⁷ See *Special Access Order*, 7 FCC Rcd 7369; *Switched Transport Order*, 8 FCC Rcd 7372.

¹⁴⁷⁸ See, e.g., 47 U.S.C. § 161 (requiring the Commission to "review all regulations . . . in effect at the time of the review that apply to the operations or activities of any provider of telecommunications service.").

on the LECs. The court found that this requirement implicated the Fifth Amendment takings clause.¹⁴⁷⁹ On remand, the Commission required LECs to provide virtual collocation. In *Pacific Bell v. FCC*,¹⁴⁸⁰ several LECs challenged the Commission's virtual collocation rules on essentially identical grounds, claiming that the virtual collocation rules also constituted an unauthorized taking. The court did not reach the merits of these claims. Instead, addressing the scope of section 251 immediately following enactment and before the FCC had yet exercised its interpretive authority with respect to the provision, the court stated that regulations enacted to implement the 1996 Act would render moot questions regarding the future effect of the virtual collocation order under review. The court did not vacate the order, but remanded to the Commission the issues presented in that case.¹⁴⁸¹

(2). Comments

614. U S West and BellSouth argue that virtual collocation is a taking and that the Commission lacks authority under section 201 to require virtual collocation under its *Expanded Interconnection* rules.¹⁴⁸² U S West also argues that the Commission lacks authority to require virtual collocation under section 251.¹⁴⁸³ Some incumbent LECs and the Florida Commission also argue that physical collocation amounts to a taking in violation of the Fifth Amendment.¹⁴⁸⁴ In opposition, several competitive carriers argue that rates that recover incremental costs of collocation will satisfy constitutional "just compensation concerns."¹⁴⁸⁵

(3). Discussion

615. We conclude that the ruling in *Bell Atlantic* does not preclude the rules we are adopting in this proceeding. The court in *Bell Atlantic* did not hold that an agency may never "take" property; the court acknowledged that, as a constitutional matter, takings are unlawful

¹⁴⁷⁹ See *Bell Atlantic v. FCC*, 24 F.3d 1441 (D.C. Cir. 1994).

¹⁴⁸⁰ 81 F.3d 1147 (D.C. Cir. 1996).

¹⁴⁸¹ *Id*

¹⁴⁸² U S West comments at 29-30; BellSouth comments at 25.

¹⁴⁸³ U S West comments at 30.

¹⁴⁸⁴ ALLTEL comments at 9; GTE comments at 66-68; US West comments at 29-31; Florida Commission comments at 15 (readoption of old physical collocation rules would be invalidated as a taking but should be readopted as model rules for the states to adopt if they chose).

¹⁴⁸⁵ MFS reply at 23; ACSI reply at 8-9; GST reply 14; ALTS reply at 8-11.

only **if they** are not accompanied by “just compensation.”¹⁴⁸⁶ Instead, the court simply said that the Communications Act of 1934 should not be construed to **permit** the FCC to take LEC property without **express** authorization. Because the court **concluded** that mandatory physical collocation would likely constitute a taking,¹⁴⁸⁷ and that **section 201 of the Act did not expressly authorize** physical collocation, the court held that the Commission was without authority under section 201 to impose physical collocation **requirements** on LECs.¹⁴⁸⁸

616. The question of statutory authority to impose (physical or virtual) collocation obligations on incumbent LECs largely evaporates in the context of the 1996 Act. New section 251(c)(6) **expressly** requires incumbent LECs to provide physical collocation, absent space or technical limitations. Where such limitations exist, the statute **expressly** requires virtual collocation. Thus, under the court’s analysis in *Bell Atlantic*, there is no warrant for a narrowing construction of section 251 that would deny us the authority to require either form of collocation. Moreover, for the reasons **stated** in the *Virtual Collocation Order*,¹⁴⁸⁹ we **continue** to believe that virtual collocation, as we have defined it, is not a taking, and that our authority to order such collocation (under either section 251 or section 201) is not subject to the strict construction canon announced in *Bell Atlantic*.

617. Given that we now have express statutory authority to order physical and virtual collocation pursuant to section 251, any remaining takings-related issue necessarily is limited to the question of just compensation. As discussed in Section VII.B.2.a.(3).(c), below, we find that the ratemaking methodology we are adopting to implement the collocation obligations under section 251(c) is **consistent** with congressional intent and **fully satisfies** the just compensation standard. There is, therefore, no merit to the LECs’ Fifth Amendment-based claims.

¹⁴⁸⁶ *Bell Atlantic*, 24 F.3d at 1445.

¹⁴⁸⁷ The Commission maintains the position that mandatory physical collocation should not properly be seen to create a takings issue. See *Remand Order*, 9 FCC Rcd at 5169.

¹⁴⁸⁸ See *Bell Atlantic*, 24 F.3d at 1447 (“we hold that the Act does not expressly authorize an order of physical collocation and thus the Commission may not impose it.”).

¹⁴⁸⁹ See 9 FCC Rcd at 5161-66.

VII. PRICING OF INTERCONNECTION AND UNBUNDLED ELEMENTS**A. Overview**

618. The prices of interconnection and unbundled elements, along with prices of resale and transport and termination, are critical terms and conditions of any interconnection agreement. If carriers can agree on such prices voluntarily without government intervention, these agreements will be submitted directly to the states for approval under section 252. To the extent that the carriers, in voluntary negotiations, cannot determine the prices, state commissions will have to set those prices. The price levels set by state commissions will determine *whether the* 1996 Act is implemented *in a* manner that is **pro-competitor** and favors one party (whether favoring incumbents or entrants) or, as we believe Congress intended **pro-competition**. As discussed more **fully** in Section **II.D.** above, it is therefore critical to implementing Congress's pro-competitive, de-regulatory national policy framework to establish among the states a common, pro-competition understanding of the pricing standards for interconnection and unbundled elements, resale, and transport and termination. While such a common interpretation might eventually emerge through judicial review of state arbitration decisions, we believe that such a process could delay competition for years and require carriers to incur substantial legal **costs**.¹⁴⁹⁰ We therefore conclude that, to expedite the development of fair and efficient competition, we must set forth rules now establishing this common, pro-competition understanding of the 1996 Act's pricing standards. Accordingly, the rules we adopt today set forth the methodological principles for states to use in setting prices. This section addresses interconnection and unbundled elements, and subsequent sections address resale and transport and termination, respectively.

619. While every state should, to the maximum extent feasible, immediately apply the pricing methodology for interconnection and unbundled elements that we set forth below, we recognize that not every state will have the resources to implement this pricing methodology immediately in the arbitrations that will need to be decided this fall. Therefore, so that competition is not impaired in the interim, we establish default proxies that a state commission shall use to resolve arbitrations in the period before it applies the pricing methodology. In most cases, these default proxies for unbundled elements and interconnection are ceilings, and states may select lower prices. In one instance, the default proxy we establish is a price range. Once a state sets prices according to an economic cost study conducted pursuant to the cost-based pricing methodology we outline, the defaults cease to apply. In setting a rate pursuant to the cost-based pricing methodology, and especially when setting a rate above a default **proxy** ceiling or outside the default proxy range, the state must give full and fair effect to the economic costing methodology we set forth in this Order and must create a factual record, including the cost study, sufficient for purposes of review after notice and opportunity for the affected parties to participate.

¹⁴⁹⁰ For a discussion of our legal authority to adopt national pricing rules, see *supra*, Section **II.D.**

620. In the following sections, we first set forth generally, based on the current record, a cost-based pricing methodology based on forward-looking economic costs, which we conclude is the approach for setting prices that best **further**s the goals of the 1996 Act. In dynamic competitive markets, firms take action based not on embedded costs, but on the relationship between market-determined prices and forward-looking economic costs. If market prices exceed forward-looking economic costs, new competitors will enter the market. If their forward-looking economic costs exceed market prices, new competitors will not enter the market and existing competitors may decide to leave. Prices for unbundled elements under section 251 must be based on cost under the law, and that should be read as requiring that prices be based on forward-looking economic costs. New entrants should make their decisions whether to purchase unbundled elements or to build their own facilities based on the relative economic costs of these options. By contrast, because the cost of building an element is based on forward-looking economic costs, new entrants' investment decisions would be distorted if the price of unbundled elements were based on embedded costs. In arbitrations of interconnection arrangements, or in rulemakings the results of which will be applied in arbitrations, states must set prices for **interconnection** and unbundled network elements based on the forward-looking, long-run, incremental cost methodology we describe below. Using this methodology, states may not set prices lower than the forward-looking incremental costs directly attributable to provision of a given element. They may set prices to permit recovery of a reasonable share of forward-looking joint and common costs of network **elements**.¹⁴⁹¹ In the aftermath of the arbitrations and relying on the state experience, we will continue to review this costing methodology, and issue additional guidance **as** necessary.

621. We reject various arguments raised by parties regarding the recovery of costs other than forward-looking economic costs in section **251(c)(2)** and (c)(3) prices, including the possible recovery of: (1) embedded or accounting costs in excess of economic costs; (2) incumbent **LECs'** opportunity costs; (3) universal service subsidies; and (4) access charges. As discussed in Section VII.B.2.a. below, certain portions of access charges may continue to be collected for an interim period in addition to section **251(c)(3)** prices.

622. With respect to prices developed under the forward-looking, cost-based pricing methodology, we **conclude** that incumbent **LECs'** rates for interconnection and unbundled elements must recover costs in a manner that **reflects** the way they are incurred. We adopt certain rules that states must follow in setting rates in arbitrations. These rules are designed to ensure the efficient cost-based rates required by the 1996 Act.

623. In the next section of the Order, we establish default proxies that states may elect to use prior to utilizing an economic study and developing prices using the cost-based pricing methodology. We recognize that certain states may find it difficult to apply an

¹⁴⁹¹ We define these and other forward-looking **cost** concepts *infra*, Section VII.B.2.a. We define what we consider to be a reasonable share of forward-looking joint and common **costs** *infra*, Section VII.B.2.a.

economic costing methodology within the statutory time frame for arbitrating interconnection disputes. We therefore set forth default proxies that will be relatively easy to apply on an interim basis to **interconnection** arrangements. We discuss with respect to particular unbundled elements the reasonable rate **structure** for those elements and the particular default proxies we are establishing for use pending our adoption of a generic forward-looking cost model. Finally, we discuss the following additional matters: generic forward-looking costing models that we intend to examine further by the first quarter of 1997 in order to **determine** whether any of those models, with modifications, could serve as better default proxies; the future adjustment of rates; the relationship of unbundled element prices to retail prices; and the meaning of the statutory prohibition against **discrimination** in sections 251 and 252.

624. Those states that have already established methodologies for setting interconnection and unbundled rates must review those methodologies against the rules we are adopting in this Order. To the extent a state's **methodology** is consistent with the approach we set forth herein, the state may apply that methodology in any section 252 arbitration. However, if a state's methodology is not consistent with the rules we adopt today, the state must modify its approach. We invite any state uncertain about whether its approach complies with this Order to seek a declaratory ruling **from** the Commission.

B. Cost-Based Pricing Methodology

625. As discussed more fully in Section **II.D.** above, although the states have the crucial role of setting specific rates in arbitrations, the Commission must establish a set of national pricing principles in order to implement Congress's national policy framework. For the reasons set forth in the preceding section and as more fully explained below, we are adopting a cost-based methodology for states to follow in setting interconnection and unbundled element rates. In setting forth the cost-based pricing methodology for interconnection and access to unbundled elements, there are three basic sets of questions that must be addressed. First, does the 1996 Act require that the same standard apply to the pricing of interconnection provided pursuant to section 251(c)(2), and unbundled elements provided pursuant to section 251(c)(3)? Second, what is the appropriate methodology for establishing the price levels for interconnection and for each unbundled element, how should costs be **defined**, and is the price based on economic costs, embedded costs, or other costs? Third, what are the appropriate rate structures to be used to set prices designed to recover costs, including a reasonable profit? We address each of these questions in the following sections.